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ABSTRACT

This paper examines differences between beginning and experienced art teachers' perceptions of teaching and learning. The paper first discusses how experienced and novice art teachers may vary in their thinking and approaches to instructional content. It then focuses on the results of a project that investigated curriculum development and teacher thinking through the use of concept maps. The paper notes that concept maps, often used to visually represent the relationship between ideas, may provide a way of understanding, extending, and assessing art teachers' perceptions of the relationships among art content, pedagogical strategies, student learning, and other factors that influence teaching. By comparing the varying conceptions of teaching held by beginning and experienced teachers, the paper suggests ways of enriching approaches to art teacher preparation. Contains two tables, four figures, and eight references. (BT)

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Differing Perceptions of Art And Teaching: Examining How Beginning and Experienced Teachers Think about Art in Instruction

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Differing Perceptions of Art And Teaching: Examining How Beginning and Experienced Teachers Think about Art in Instruction

The purpose of this paper is to examine differences in beginning and experienced art teachers' perceptions of teaching and learning. To begin, I will discuss how experienced and novice art teacher's may vary in their thinking and approaches to instructional content. Next, I will focus on the results of a project that investigated curriculum development and teacher thinking through the use of concept maps[1]. Often used to visually represent the relationship between ideas, concept maps may provide a way of understanding, extending, and assessing art teachers' perceptions of the relationship between art content, pedagogical strategies, student learning, and other factors that influence teaching. By comparing the varying conceptions of teaching held by beginning and experienced teachers, my goal is to suggest ways of enriching approaches to art teacher preparation.

Differences in Thinking About Instruction

As a teacher educator, I am interested not only in how novice art teachers think about art content in teaching, but I am also fascinated by how *different* beginning art teachers are from their more experienced colleagues. Anyone who works with art teachers is probably familiar with these variations, however I believe a comparison of these characteristics is particularly useful when developing strategies for helping novice art teachers move towards teaching expertise. Of primary interest are the following questions:

- What changes occur in teachers' approaches to instruction as they gain classroom experience?
- What factors influence these changes?
- Can beginning art teachers learn to approach instruction in ways similar to more experienced teachers?

An Illustration

To examine the variations between art teachers, I'd like to describe a teaching performance I observed recently. You may even have observed a similar lesson:

> Janet[2] , a student teacher, has decided to develop and present a unit on Greek pottery to her seventh grade students. To prepare her unit, she spends a lot of time investigating Greek art and culture at the library. Janet is excited that she picked this topic when she finds a lesson plan on Greek art in a magazine. To Janet, the published lesson looks like a lot of fun and she decides to use the plan with few additions. To explain the topic, Janet develops several posters about Greek art to display in the artroom. In class, she begins her

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[1] This research was partially funded by the Graduate Research Fund at the University of Kansas.

[2] All names used in this paper are pseudonyms.

unit by showing students several pictures of Greek architecture and vases while providing some basic information about the images. Next, her students are directed to use one of the vessel shapes from a chart to create a painting of a vase that tells a story. Janet 's opening presentation lasts less than five minutes including the explanation of the studio activity. During this time, she neither asks questions nor attempts to actively involve students in the lesson. She even neglects to refer to several of the charts displayed on the bulletin board. When discussing the lesson after class Janet says she is disappointed with the behavior of the students. She explains that several students seemed to off-task and talkative. Furthermore, Janet indicates that the students didn't really work as hard on their paintings as she had hoped although they all completed the assignment well before the end of the period.

Obviously, Janet's lesson could be improved in several ways. Some changes will no doubt occur as she gains experience. With time, she may learn to create activities that more effectively connect to the topic she is teaching while actively engaging her students in the learning process.

However, let's examine the content of her lesson and what it says about how she perceives art instruction. First, it is interesting to note that Janet relates the success of her lesson to how well students behave rather than what they learn. For Janet, and many other beginning teachers, merely keeping students on task is a sign that the lesson objectives are being achieved. In addition, Janet's lesson lacks a clear focus or key idea, and thus, the studio activity does little to reinforce the brief art information she presents at the beginning of the period. Indeed, the lesson content is superficial and reflects Janet's simplistic thinking about the topic of Greek vessels. This reductionist understanding of Greek art may have limited her ability to adequately research the topic, and it may have led to the lack of coherence between the subject and the studio project. It may also account for her use of a published lesson plan without consideration for her specific curricular goals, teaching situation, or student interests and abilities. Or, Janet's discovery of the published lesson plan may have interrupted her thinking about Greek art by providing her with a complete curricular direction before she had adequately considered her own teaching situation.

Janet's performance is not surprising given what we know about how novice teachers approach instruction and how they vary from expert teachers. Investigators examining educators from this perspective disclose that beginning teachers frequently have superficial understandings of their subject and lack the ability to relate it to student needs and teaching strategies. In contrast, accomplished teachers have a rich and deep knowledge of the subjects they teach, and their understandings are organized in elaborate, coherent patterns of conceptual and procedural knowledge called schemata. Schemata act as organizing frameworks and include information about teaching strategies, content, materials and techniques, student abilities and prior knowledge, and school procedures. While experts employ their schemata with little cognitive effort, the

schemata of novices are often shallow or incomplete and difficult to apply when needed. Furthermore, even when asked to develop lessons that promote higher order understandings in pupils, novice teachers often plan simplistic instructional episodes or borrow ideas from published sources without considering the learning potential for their students. Beginning teachers' lessons may lack a cohesive structure or fail to account for such fundamental aspects of teaching as student characteristics and assessment strategies. Indeed, research has shown that educators with shallow, inadequately organized content knowledge taught "few, if any, conceptual connections, [made] less powerful representations, and over routinized student responses" (Stein, Baxter, & Leinhardt, 1990, p. 659).

Often used to visually represent the relationship between ideas, concept maps may provide a way of assessing and extending novice teachers' schemata of art content and pedagogical strategies. Concept maps, sometimes called webs, have been used in the field of science education to characterize the configuration of understandings and misunderstandings students hold about particular topics. For instance, a shallow understanding of a topic would be indicated by fewer clusters of ideas and limited cross-links. When applied to thinking about instruction, a concept map can reveal how teachers view the connections between art content, pedagogical strategies, student learning, and other factors that influence teaching. By facilitating the recall of information about a topic, concept maps can assist individuals to journey through complex material in a more meaningful way (Novak & Gowin, 1984, p. 44). One way of improving teacher understanding and art instruction may be to enhance the development of intricate schemata in novice art educators who generally lack the ability to devise curricula with complex interconnections. Thus, a concept map may be a good strategy to use when exploring individuals' understanding of topics as well as when designing curricula.

Assessing Understanding Through Concept Maps

As part of a larger project that explored teachers' approaches to art content and instruction, I asked several art education majors (n = 18) and experienced art teachers (n = 3) to create a concept map of a lesson titled "Learning About Self-Portraits". To study how teachers with differing amounts of experience use information in curriculum development, I gave participants a published lesson plan (Grishham, 1993) focusing on the painter, Ivan Albright and instructed them to use as much or as little information as needed when developing their concept maps. I also encouraged participants to make use of their own knowledge of portraits in developing their concept maps on the topic. An examination of the completed concept maps reveal some interesting differences and similarities between the way beginning and experienced teachers use curriculum information and think about relationships in lessons.

Overview of Concept Maps

A wide variety of concept maps were devised by beginning and experienced art educators in this phase of the project. Some maps were surprisingly simplistic while others revealed complex approaches to lesson content. Furthermore, findings indicated that beginning and experienced teachers' thinking about the self-portrait lesson were distinguished by the extent to which they relied on the published lesson plan content in their maps and the degree to which map components contained complex links to other concepts.

Use of Published Lesson Content in Concept Maps

Beginning teachers typically used a larger portion of ideas from the published lesson plan in their maps than did experienced art teachers (see Table 1). In contrast, experienced teachers tended to draw on their own knowledge of art more frequently than did beginning teacher participants. In fact, at least 50% of the content of 11 of 18 novice teacher concept maps and over 75% percent of five novice teachers maps was taken directly from the Albright lesson plan and background information. Experienced teachers in this project, on the other hand, relied on article information much less. On average only 28% of experienced teacher concept maps included ideas from the provided information compared to 55% of all beginning teacher maps.

The most commonly used information from the article involved contextual information about Ivan Albright's training and formative art experiences. For instance, 88% of novice teacher maps included concepts about Ivan Albright's father, a painter who studied at the Pennsylvania Academy of Art under Thomas Eakins. In these maps, little attempt is made to relate the work of Eakins to Albright's portrait or to his interest in realism, an obvious connection not developed in the lesson plan. While Eakins is mentioned in 10 (55%) novice teacher maps, only one map links Eakins to other artists or ideas.

Novice teachers frequently compared Albright's painting to the work of other artists. Thirteen of 18 novice teachers (72%) listed another artist in their concept map in addition to Eakins and Albright's father. In 54% of these concept maps the German Expressionist painter, Max Beckman was mentioned, a direct reference from the article. Other artists included in concept maps were Rembrandt, Willem de Kooning, Salvadore Dali, and Frida Kahlo. Interestingly, little specific information was given about these artists other than their name, although several novice teachers indicated that they would make comparisons of style and contextual information.

Teaching activities and methods suggested by the lesson plan were also frequently incorporated in novice teachers' concept maps. For instance, when pedagogical strategies were included in beginning teacher maps, 42% suggested students make a list of objects in the Albright self-portrait and 58% recommended students use "their favorite possessions ...in order to create a self-portrait without including an image of themselves" (Grisham, 1993, p. 38). A third of the novice teacher participants recommended role playing a conversation with Albright to understand

his work, a suggestion included in the stimulus article as well. Few concept maps deviated from specific pedagogical activities contained in the Albright lesson plan. One novice teacher included the idea, "what you would take to the moon with you" as possible motivation for a studio activity that emphasized students "knowing themselves" by creating a self-portrait without depicting themselves. Another novice teacher indicated that students would compare Albright and Beckman paintings to understand differences and "use [the] artists' ideas while creating a self-portrait". In contrast, experienced teachers, on the whole did not utilize this aspect of the article, but developed pedagogical strategies from their own knowledge base. This difference is not surprising because novice art teachers generally lack a well developed repertoire of pedagogical strategies and are, therefore, likely to draw on what they have read or observed for instructional ideas.

Interpretive aspects of Albright's self portrait were included less often than other elements of novice teachers' concept maps. However, when included in concept maps, interpretive ideas were taken directly from the article. For instance, the article states:

> The paintings of Ivan Albright play with our vision of the observable world. They are strange and often disturbing revelations of palpable reality....Albright's style of painting and his interest in subjects that show the wear and tear of time characterize his distinct vision. (Grisham, 1993, p. 28)

While fewer concept maps (28%) referred to Albright's "vision of the observable world", 61% included the idea that Albright's painting is "strange and disturbing". Although 22% of concept maps that incorporate interpretive statements mentioned the phrase "palpable reality", "Wear and tear of time" appeared as a concept in 44% of novice teacher concept maps. The distinctive nature of these terms make it unlikely that novice teachers would have included these ideas without the lesson plan as a prompt.

A comparison of novice teachers' inclusion of article information. As indicated above, novice teachers in this project varied in their use of ideas from the Albright lesson plan. For instance, most of the concepts in the maps created by Lynn were derived from information in the Albright article (see Figure 1), but only 13% of Amanda's concept map can be directly related to phrases or ideas from the same source. Outlined by a rectangular box, Lynn's map contains one primary component: "Self-Portrait by Ivan Albright". This topic is surrounded by four groups of concepts: early training and art preparation, interpretive aspects of the artist's work, a listing of objects located in Albright's self-portrait, and pedagogical strategies. Rather than developing a single word to represent an idea, Lynn joined phrases to create simple sentences found in the article. For instance, Lynn connected the phrases "Albright's painting subject matter" to "strange and disturbing revelations of palpable reality", a statement quite close to the sentences in the above description of interpretive aspects of the work. Lynn's teaching strategies also come

directly from the article when she connects "student personalities", "list favorite possessions", and "choose objects from list" to the term "classroom activities".

In contrast, Amanda's map focuses on student needs and pedagogical strategies while including general references to portraits and no mention of Ivan Albright (see Figure 2). For instance, Amanda recognizes that the teaching climate affects students' learning. The concept "classroom environment" is the center of a group of six ideas including "teachers' attitude", "classroom management", "seating arrangement", "noise", "fun, upbeat", and "kids excited to learn". Furthermore, Amanda links the phrases, "students knowing themselves" with "how you spend your time" and "leisure, athletics, fun, movies, reading, and more". These components stress student self-knowledge in preparation for a studio activity involving the creation of a self-portrait without depicting themselves, an idea similar to an activity suggested in the article and included in Lynn's concept map as well. However, Amanda's concepts and links provide a clearer picture of how she would organize instruction and what factors she must consider when developing a lesson plan. Owing most of its content to the stimulus article, Lynn's concept map omits these considerations. This is potentially problematic in light of my earlier description of Janet's lesson on Greek art drawn from a published lesson because Lynn is also likely to teach the topic of self-portraits without adequately developing her pedagogical ideas or accounting for student interests and abilities.

Complexity of Concept Maps

The number of links from one concept to another is a primary factor when judging the complexity of concept maps. Concepts with few links are considered simplistic, while a map with a network of elaborate links between concepts is recognized as complex (McClure & Bell, 1990). Researchers have related the complexity of maps to depth of subjects' understanding of a topic (Ruiz-Primo & Shavelson, 1996). Although novice teachers' maps varied more widely in complexity than did those of the experienced teachers in this project, novice and experienced teachers' maps were similar in some aspects. For example, the average number of concepts with three or more links were the same for both novice and experienced teacher participants. However, when examining the content of concepts with four of more links, a more accurate indicator of complexity, some interesting variations were apparent. Most complex concepts included in beginning teacher concept maps focused on historical/contextual information while experienced teachers' complex concepts were pedagogical in nature (see Table 2). Again, recall that historical/contextual information occurring in novice teacher maps was likely to be drawn directly from article content.

A simplistic map with few components. Alan's map about portraits reveals simplistic understandings of the art content while including relatively little that would help him teach a lesson on this topic (see Figure 3). Alan's map contains a total of 13 concepts organized in

a hierarchical fashion from two primary topics: "Content of Lesson" and "Communicating Ideas Effectively". His map contains no cross-links connecting one topic to more than the concept below it. Interestingly, Alan relates classroom management to the idea of communicating ideas effectively. This relationship is similar to the connection Janet made between her lesson presentation and student behavior in the lesson on Greek art described earlier in this paper. Alan's lesson content focuses on two components: the history and purpose of portraits. Both concepts include a few sub-concepts, however Alan's map lacks specific examples of portraits or artists. He has even neglected to draw on the Albright lesson for an illustration of a portrait. Rather than being heavily influenced by the article information, Alan fails to make use of its potentially effective examples and ideas. Finally, the structure of Alan's concept map is relatively simplistic with no overlap or cross-links between his two primary components. Indeed, the components contains only limited links to other sub-concepts.

A map with elaborate cross-links. In contrast, Juan's concept map contains elaborately connected components drawn from his understanding of portraits and article information (see Figure 4). Eighty percent of the concepts in Juan's map contain three or more links, more than any other participant in this study. In addition, Juan was the only participant to include Thomas Eakins in his map as an artist rather than the teacher of Albright's father. Juan actually compares Rembrandt, DeKooning, and Eakins to Albright as well. Although Juan introduces ideas not used by other participants, the distinguishing feature of his map is the connections he makes between concepts. For instance, the term "anatomy study" is linked to eight other concepts including several artists and styles. In other novice educators' maps, anatomy generally is connected only to Albright's early training in realistic drawing. It is likely that the multifaceted character of this map would lead to a rich lesson that would do a more effective job of promoting deeper art understandings than concept maps that lack these elaborate cross-links.

Suggestions for Enriching Art Teacher Preparation

It is possible that the relative simplicity of novice teachers' concept maps can be partially attributed to the linear nature of their undergraduate preparation which gives them the impression that learning is typically organized and predictable. Not surprisingly, many students view their teacher preparation as a series of steps to be planned and executed with little effort. Most art education majors complete course work in studio processes and art history before beginning their pedagogical training in art education. For instance, at my university students begin art education studies in their junior year after completing a prerequisite number of studio, art history, and general studies credits. Because students are required to make few connections among courses during a semester or from one class to the next, they may have difficulty drawing on art knowledge when enrolled in education courses. Except in same subject courses, students have rarely been asked to recall and apply information. Therefore, their art understandings may be organized in discrete

components similar to the structure of classes they have taken. For example, in basic painting courses, skill development and technique are often stressed and little emphasis is placed on exploring ideas or understanding the meaning of artists' work. Although art history courses tend to include presentations on contextual factors as well as style and meaning, the techniques and processes of creating paintings are not, on the whole, emphasized or discussed. The process of creating concept maps asks participants to cross-link art meanings, an operation contrary to the way their knowledge may be stored. Thus, students are conditioned to view education as a linear process where they will make use of what they know in some distant future. This may be an unreasonable assumption, because research has shown that individuals have difficulty applying what they know in novel situations (Perkins & Salomon, 1988).

This linear progression of coursework can limit novice art teachers' thinking about art in another way. Shulman (1986) has used the term Pedagogical Content Knowledge to characterize how teachers must transform their subject matter knowledge into content for teaching. Predictably, this process is challenging for beginning teachers. In art, content is rarely learned in the format in which it is appropriate to present in the schools. For instance, although art history courses typically present information in a chronological order using lecture method, art teachers often organize curriculum thematically using more interactive teaching strategies. Thus, art education students have probably studied the work of Rembrandt but may have difficulty relating the self-portraits he painted to the work of artists in another century or culture.

Clearly, novice teachers in this project tended to use information from published lessons with little modification. While some novice art teachers created elaborate concept maps with extensive cross-links, more frequently their maps contained few connections to concepts. These findings confirm results of research focusing on teacher cognition: beginning educators have a difficult time accessing and applying what they know as well as selecting appropriate lesson content. This is problematic in a field like art education, where the nature of the subject is open-ended and ill-defined and teachers have a primary role in the selection of curriculum (Efland, 1995). Not all published lesson plans will promote significant art understandings in students, and teachers must be able to recognize curricular shortcomings and modify lessons for their specific teaching situations to promote higher order learning

Although a small number of experienced teachers were included in this project as a comparison, striking differences in concept maps were revealed. While small sample size must limit the conclusions that can be drawn about experienced teachers' thinking, examining the differences between experienced and novice teachers may provide a rich picture of how pedagogical content knowledge grows and changes with time. Decifering this learning process may make it possible to facilitate complex understandings in novice teachers so that their schemata more closely resemble those of experienced teachers.

For these reasons, preservice programs in art education need to focus on training teachers who can understand the elaborate and interconnected nature of art learning and can translate their art knowledge and pedagogical understandings to classroom content. Although this is not an easy task, some steps could be taken to encourage this kind of thinking in novice teachers. I offer the following suggestions as a starting point:

- A low credit introductory course focusing on the broader perspective and understandings needed to be a successful teacher should be taken by individuals as soon as they declare their intention to teach art. Such a course should include a field observation component and make connections between the content of university classes, typical pedagogical approaches to instruction at the college level, and successful teaching strategies in K-12 art programs. Emphasis would be placed on helping preservice art teachers view their training in a less linear way while encouraging an awareness of how subjects relate and build on each other.

- Ways of organizing knowledge and making connections should be explicitly incorporated in art education methods courses. Currently, many university programs are configured to follow a discipline based art education (DBAE) model. However, knowledge of studio, art history, criticism, and aesthetics alone does not guarantee that art will be taught so that significant learning will occur in classrooms. In fact, unless teachers restructure their schemata to integrate DBAE components, fragmented and superficial curriculum and instruction will result. Thus, concept maps could provide a structure to connect new ideas, pedagogical strategies, and required readings in art education courses.

- It's possible that novice teachers accepted and incorporated such a high percentage of ideas from the Albright article because they view lessons in print as expert examples that would be successful in any teaching situation. However, not all published lesson plans are equally good or appropriate in every circumstance. Art teacher educators should recognize that published lesson plans can be very seductive in shaping beginning teachers' initial efforts at curriculum development. In some ways, published plans may interupt teachers' reasoning thus discouraging the kind of deep thinking we hope they will do when planning and teaching lessons. Thus, novices need to develop the skills to critically evaluate published curriculum and recognize what aspects of the suggestions need additional thought or development.

- Concept maps could also be used in lesson planning as either a supplement or as a replacement to more traditional formats. As an addition to the more linear curriculum models, concept maps

could assist teacher educators to assess preservice teachers' thinking about lessons by uncovering areas that need extra development or attention.

Finally, novice art teachers must come to view teaching art as a complex process that involves their continued growth as a thinker and teacher. Concept maps may offer a possible way of understanding how teachers view the interaction of art content and pedagogical activities while facilitating a more complex, non-linear approach to teaching and learning.

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Table 1

Concepts and Links in Novice Teacher Concept Maps

Participants (N=21)	Total concepts	# from article	% of concepts from stimulus article	Concepts with 3 links	Concepts with 4 or more links	% of concepts with 4 links or more	% of combined complex links links
01 NT	39	30	77 %	09	03	08 %	31 %
02 NT	56	07	13 %	03	06	11 %	16 %
03 NT	43	12	28 %	03	12	28 %	35 %
04 NT	28	13	46 %	02	04	14 %	21 %
05 NT	13	00	00 %	02	02	15 %	31 %
06 NT	20	06	30 %	04	12	60 %	80 %
07 NT	35	14	40 %	03	03	09 %	17 %
08 NT	16	08	50 %	01	00	00 %	06 %
09 NT	36	18	50 %	02	02	05 %	11 %
10 NT	48	33	69 %	04	10	21 %	29 %
11 NT	47	25	53 %	07	07	15 %	30 %
12 NT	73	61	84 %	08	08	11 %	22 %
13 NT	46	32	70 %	06	05	11 %	24 %
14 NT	76	64	84 %	10	10	13 %	26 %
15 NT	35	34	97 %	04	03	09 %	20 %
16 NT	47	29	62 %	03	05	11 %	17 %
17 NT	64	27	42 %	06	14	22 %	31 %
18 NT	29	25	86 %	03	00	00 %	10 %
01 ET	23	05	22 %	03	03	13 %	26 %
02 ET	93	21	23 %	15	08	09 %	25 %
03 ET	34	13	38 %	05	04	12 %	26 %

NT = Novice Teacher (n=18)
ET = Experienced Teacher (n=3)

Table 2

Comparision of Novice and Experienced Teachers' Content Categories in Concepts with Four or More Links

	Concept Frequency			
	Novice Teachers (n = 18)		Experienced Teachers (n=3)	
Concept Categories	#	%	#	%
Descriptive	11	10%	02	13%
Formal	05	05%	00	00
Historical/Contextual	47	45%	05	33%
Interpretive	02	02%	00	00
Technical	09	08%	00	00
Pedagogical	25	23%	06	40%
Other	09	08%	02	13%

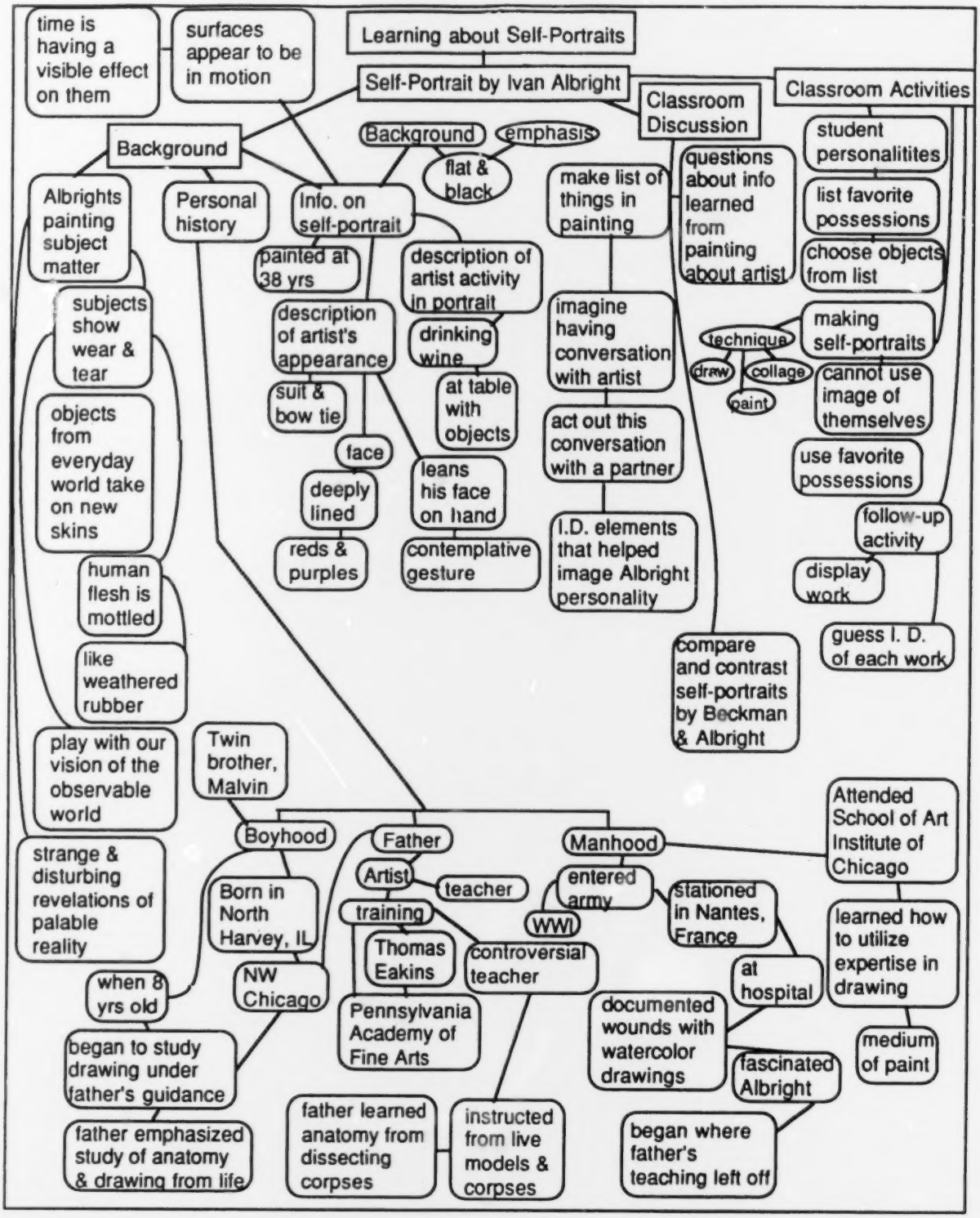

Figure 1. Concept map of novie teacher, Lynn, using extensive information from the stimulus article.

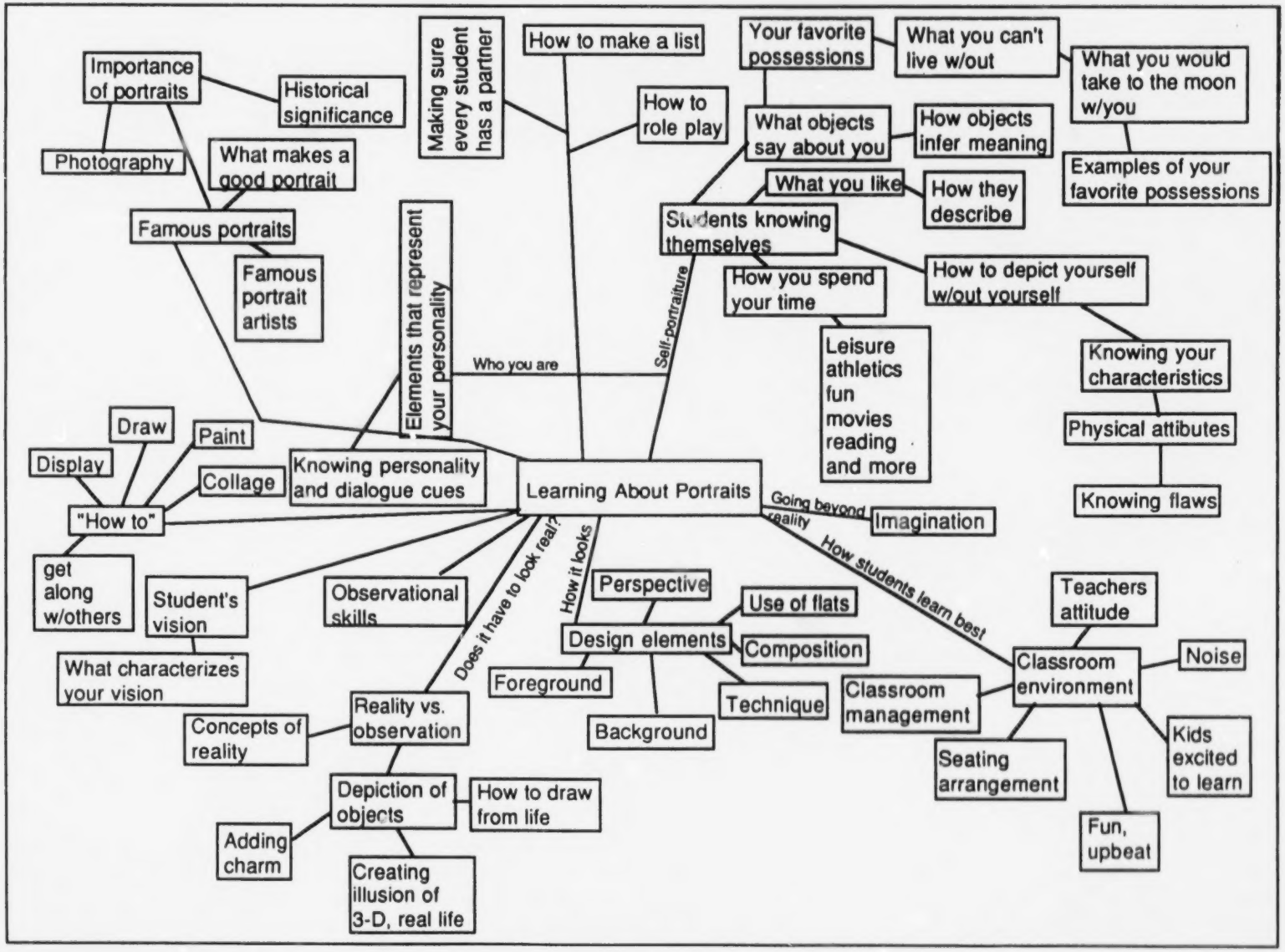

Figure 2. Concept map of novice teacher, Amanda, using limited information from stimulus article.

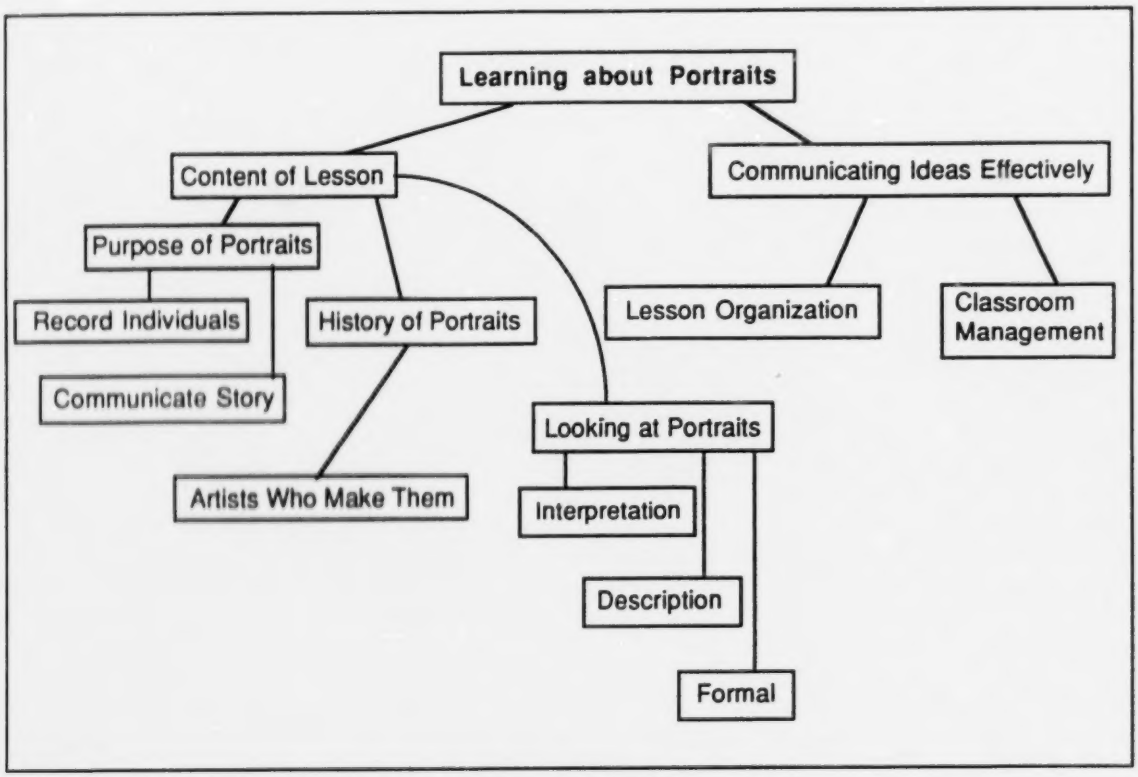

Figure 3. Concept map of novice teacher, Alan, depicting few cross-links.

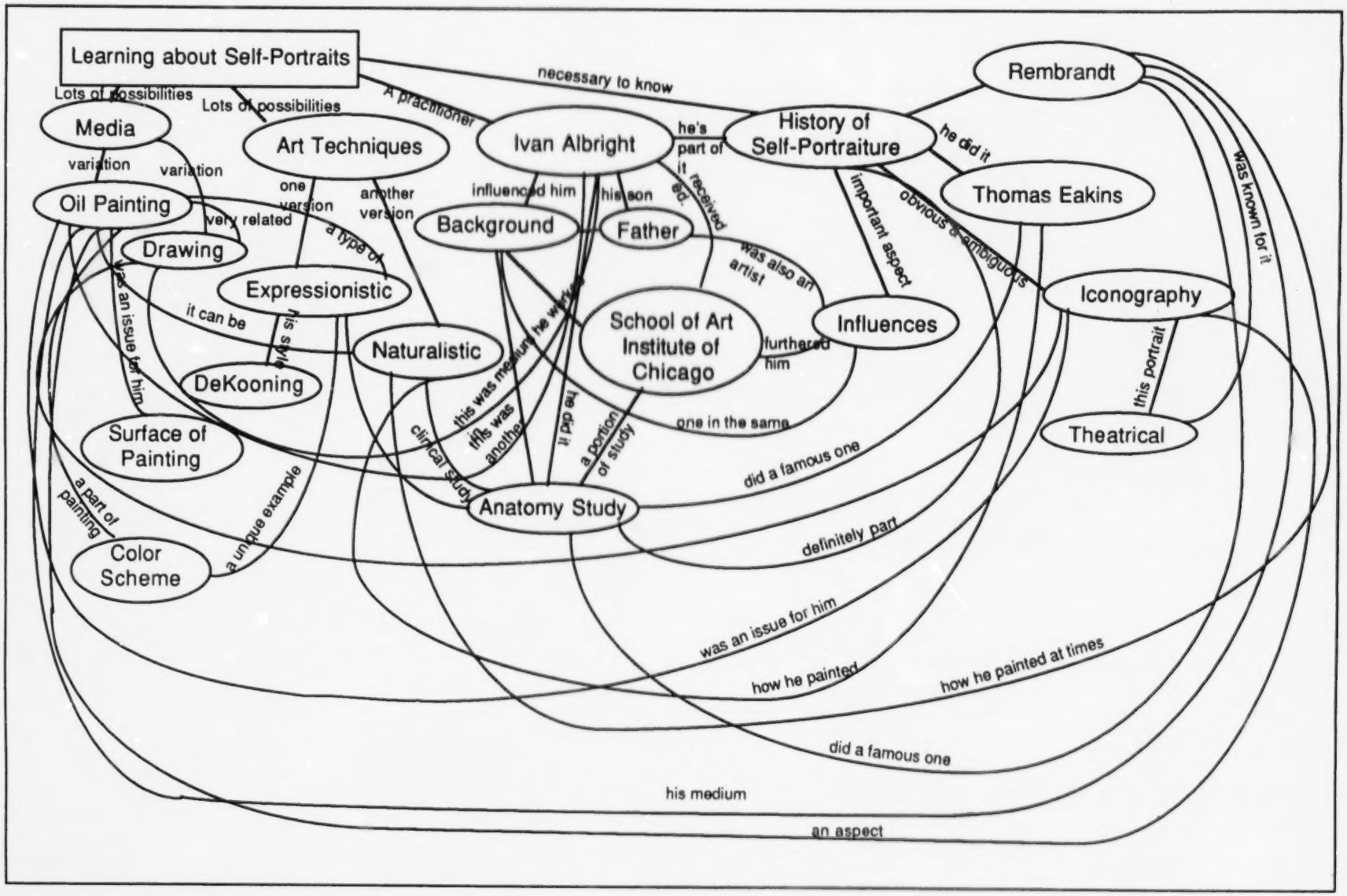

Figure 4. Concept map of novice teacher, Juan, depicting elaborate cross-links.